

DEPARTMENT of ENVIRONMENTAL SERVICES
Water Division - Watershed Management Bureau

LAKE TROPHIC DATA

MORPHOMETRIC:

Lake: STONE POND	Lake Area (ha): 10.44
Town: MARLOW	Maximum depth (m): 4.0
County: Cheshire	Mean depth (m): 1.2
River Basin: Connecticut	Volume (m ³): 124500
Latitude: 43°09'30" N	Relative depth: 1.1
Longitude: 72°12'50" W	Shore configuration: 1.21
Elevation (ft): 1261	Areal water load (m/yr): 20.59
Shore length (m): 1400	Flushing rate (yr ⁻¹): 17.70
Watershed area (ha): 434.9	P retention coeff.: 0.47
% watershed ponded: 0.0	Lake type: natural w/dam

BIOLOGICAL:

22 January 2003

11 July 2002

DOM. PHYTOPLANKTON (% TOTAL)	#1	SPARSE - NO DOMINANT	CHRYOSOPHAERELLA 99%
	#2		
	#3		
PHYTOPLANKTON ABUNDANCE (units/mL)			
CHLOROPHYLL-A (µg/L)			11.88
DOM. ZOOPLANKTON (% TOTAL)	#1	LRG CILIATE SPP. 61%	POLYARTHRA 40%
	#2	KELLICOTTIA 13%	KERATELLA 33%
	#3	KERATELLA 9%	NAUPLIUS LARVA 8%
ROTIFERS/LITER		14	319
MICROCRUSTACEA/LITER		12	54
ZOOPLANKTON ABUNDANCE (#/L)		67	379
VASCULAR PLANT ABUNDANCE			Abundant
SECCHI DISK TRANSPARENCY (m)			1.2
BOTTOM DISSOLVED OXYGEN (mg/L)		3.2	0.6
BACTERIA (E. coli, #/100 ml)	#1		4
	#2		1
	#3		

SUMMER THERMAL STRATIFICATION:

weakly stratified

Depth of thermocline (m): None
Hypolimnion volume (m³) : None
Anoxic volume (m³) : 1100

CHEMICAL:

Lake: STONE POND

Town: MARLOW

	22 January 2003		11 July 2002		
DEPTH (m)	1.0	2.0	1.0		3.0
pH (units)	5.6	5.6	6.5		6.1
A.N.C. (Alkalinity)	4.1	4.1	3.6		3.5
NITRATE NITROGEN	0.05	< 0.05	< 0.05		< 0.05
TOTAL KJELDAHL NITROGEN	0.30	0.50	0.30		0.40
TOTAL PHOSPHORUS	0.011	0.009	0.019		0.013
CONDUCTIVITY (μ mhos/cm)	73.7	90.2	58.5		57.5
APPARENT COLOR (cpu)	38	40	68		70
MAGNESIUM			0.48		
CALCIUM			2.3		
SODIUM			7.1		
POTASSIUM			0.45		
CHLORIDE	12	17	11		10
SULFATE	7	7	4		4
TN : TP	32	56	16		31
CALCITE SATURATION INDEX			3.9		

All results in mg/L unless indicated otherwise

TROPHIC CLASSIFICATION: 2002

D.O.	S.D.	PLANT	CHL	TOTAL	CLASS
**	4	5	2	11	Eutro.

COMMENTS:

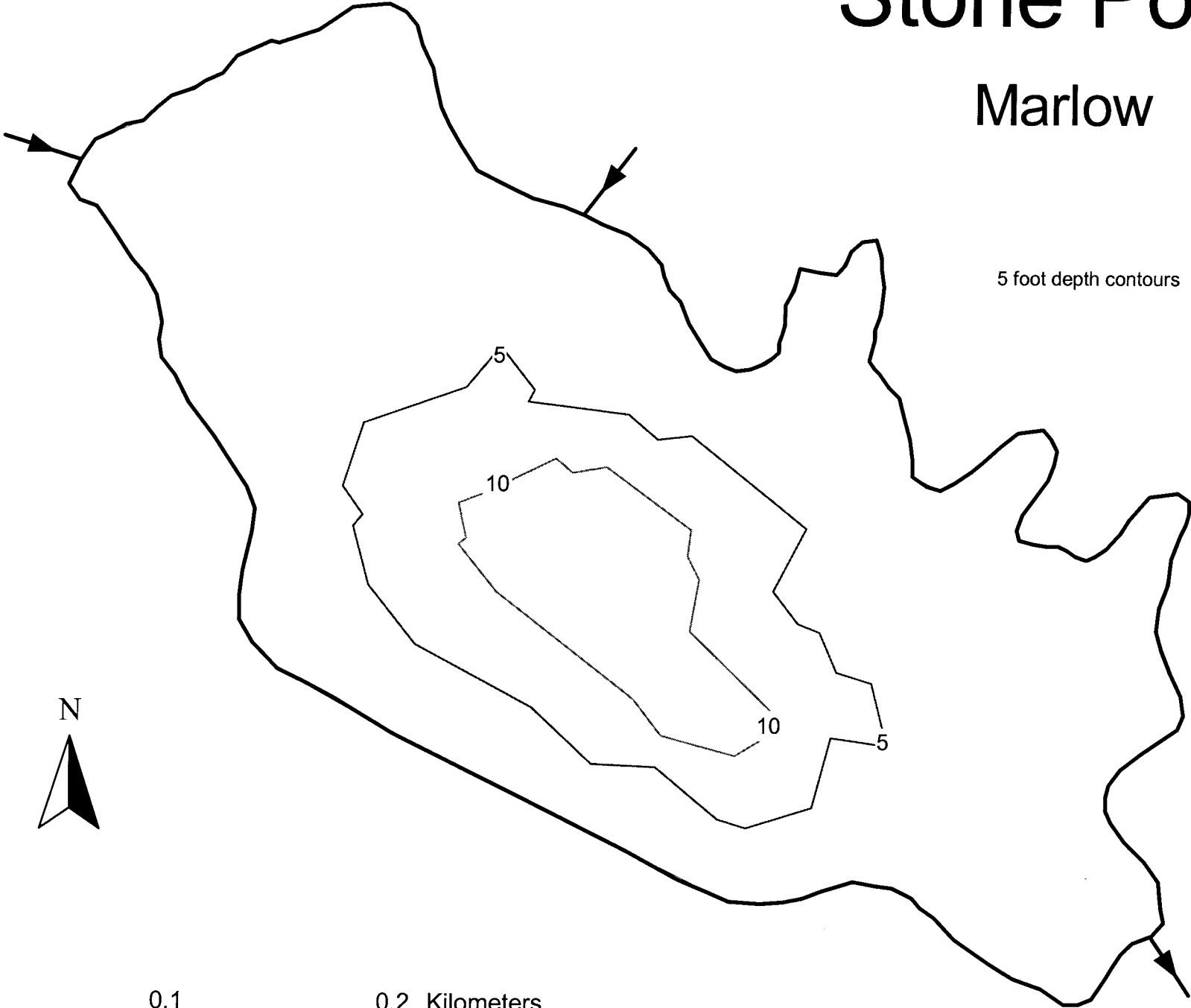
1. Previously surveyed in 1979 where it was classified mesotrophic. The change in trophic class was partly due to increased chlorophyll and decreased water transparency, and partly due to a revised classification protocol between the two years. More frequently collected data is needed to determine if the change is part of a trend or normal year-to-year variation.
2. Good launch site with adequate parking.
3. Sparsely developed – three houses along the shore.
4. This is a moderately acidic, tea-colored, eutrophic pond with abundant rooted plant growth.

Stone Pond

Marlow

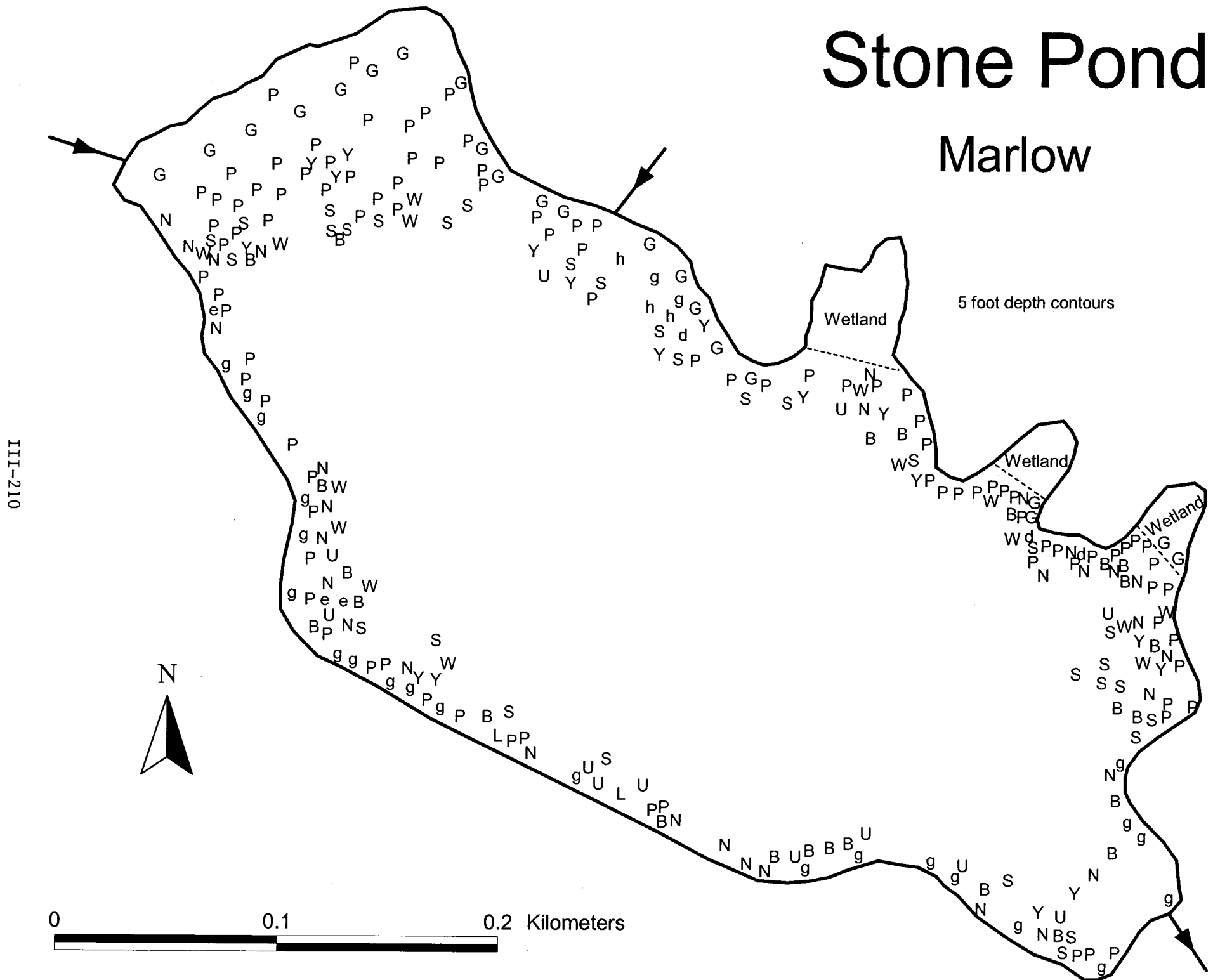
5 foot depth contours

III-208



Stone Pond

Marlow



III-210

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